

b) Amendments to the Claims

Please amend claims 1, 16, 17, 25 and 27 and add new claims 28-48 as follows. A detailed listing of all the claims that are or were in the application follows.

1. (Currently Amended) A replenishing developer, comprising:

1 wt. part of a carrier and 2 - 50 wt. parts of a toner,

wherein the carrier is a magnetic fine particle-dispersed resin carrier

comprising at least inorganic compound particles and a carrier binder resin, the toner has a weight-average particle size of 3 to 10 μm and contains 1 to 40 wt. % of solid wax,

wherein the carrier binder resin comprises a thermosetting resin, [[and]]

wherein the inorganic compound particles comprise magnetite particles containing at least one additive element selected from the group consisting of magnesium, silicon, manganese and phosphorous, and

wherein the magnetite particles contain said at least one additive element in a total amount of based on 0.03 - 5.0 wt. % based on [[of]] Fe.

2. (Cancelled)

3. (Original) A replenishing developer according to claim 1, wherein the carrier binder resin comprises at least a phenolic resin.

4. (Original) A replenishing developer according to claim 1, wherein the carrier comprises a carrier core and a resin coating the carrier core.

5. (Original) A replenishing developer according to claim 4, wherein the coating resin comprises a silicone resin.

6. (Original) A replenishing developer according to claim 1, wherein the carrier has a volume-average particle size of 15 to 60 μm .

7. (Original) A replenishing developer according to claim 1, wherein the carrier has a true specific gravity of 2.5 to 4.5.

8. (Original) A replenishing developer according to claim 1, wherein the carrier has a magnetization (δ_{1000}) as measured at a magnetic field of $1000/4\pi$ kA/m of 15 - 65 Am^2/kg (emu/g), and a residual magnetization (δ_r) of 0.1 - 20 Am^2/kg .

9. (Previously Presented) A replenishing developer according to claim 8, wherein the carrier has a residual magnetization (δ_r) of 2.9 - 6.9 Am^2/kg .

10. (Original) A replenishing developer according to claim 1, wherein the carrier exhibits a flowability A in a magnetized state and flowability B in a de-magnetized state, satisfying $B/A \leq 1.5$.

11. (Original) A replenishing developer according to claim 10, wherein the carrier exhibits A and B satisfying $B/A \leq 1.2$.

12. (Original) A replenishing developer according to claim 1, wherein the carrier has a residual magnetization δ_r (Am²/kg) and a volume-average particle size d (μm) satisfying:

$$1.0 \leq d/\delta_r < 30.0.$$

13. (Original) A replenishing developer according to claim 1, wherein the carrier has a residual magnetization δ_r (Am²/kg) and a volume-average particle size d (μm) satisfying:

$$5.1 \leq d/\delta_r \leq 12.3.$$

14-15. (Cancelled)

16. (Currently Amended) A replenishing developer according to claim 1, wherein the magnetite particles contain at least one metal element selected from the group consisting of zinc, copper, nickel, cobalt, aluminum, tin, titanium and zirconium in a total amount ~~of~~ based on 0.01-3.0 wt. % based on ~~[[of]]~~ Fe, and ~~contain both~~ the additive element and the metal element being surface-exposed on the magnetite particles in a total amount ~~based on~~ of surface-exposed additive element and metal element of 0.01-1.5 wt. % based on ~~[[of]]~~ Fe.

17. (Currently Amended) A replenishing developer according to claim 16, wherein the magnetite particles contain the additive element being surface-exposed on the magnetite particles in a total amount of ~~based on~~ 0.01 - 0.5 wt. % based on [[of]] Fe.

18. (Previously Presented) A replenishing developer according to claim 1, wherein said at least one additive element is divided into a first additive element of magnesium and at least one second additive element selected from the group consisting of silicon, manganese and phosphorous, and said first additive element and said at least one second additive element are contained in the magnetite particles in a weight ratio of 1:9 to 9:1.

19. (Original) A replenishing developer according to claim 1, wherein the inorganic compound particles have been surface-treated with a lipophilizing agent.

20. (Original) A replenishing developer according to claim 19, wherein the lipophilizing agent is a silane coupling agent.

21. (Original) A replenishing developer according to claim 4, wherein the carrier core comprise particles produced by polymerization of a polymerizable composition comprising the inorganic compound particles and a monomer providing the binder resin through the polymerization.

22. (Original) A replenishing developer according to claim 1, wherein the toner comprises toner particles produced by polymerization.

23-24. (Cancelled)

25. (Currently Amended) A developing method, comprising:
developing an electrostatic latent image on an image-bearing member with a two-component developer comprising a toner and a carrier stored in a developer vessel, while periodically supplying a replenishing developer to the developer vessel,[[;]]

wherein the replenishing developer comprises 1 wt. part of a carrier and 2 - 50 wt parts of a toner, wherein the carrier is a magnetic fine particle-dispersed resin carrier comprising at least inorganic compound particles and a carrier binder resin, the toner has a weight-average particle size of 3 to 10 μm and contains 1 to 40 wt. % of solid wax,

wherein the carrier binder resin comprises a thermosetting resin,

wherein the inorganic compound particles comprise magnetite particles containing at least one additive element selected from the group consisting of magnesium, silicon, manganese and phosphorous, and

wherein the magnetite particles contain said at least one additive element in a total amount of 0.03 - 5.0 wt. % based on Fe.

26. (Original) A developing method according to claim 25, wherein the replenishing developer is supplied to the developer vessel in response to a toner consumption detected by detecting a toner concentration in the developer vessel.

27. (Currently Amended) A developing method comprising:
developing an electrostatic latent image on an image-bearing member with a two-component developer comprising a toner and carrier stored in a developer vessel, while periodically supplying a replenishing developer to the developer vessel using as the replenishing developer a replenishing developer according to any one of claims 3-13 [[2-13]] or 16-22.

28. (New) A replenishing developer, comprising:
1 wt. part of a carrier and 2 - 50 wt. parts of a toner,
wherein the carrier is a magnetic fine particle-dispersed resin carrier comprising at least inorganic compound particles and a carrier binder resin, the toner has a weight-average particle size of 3 to 10 μm and contains 1 to 40 wt. % of solid wax,
wherein the carrier has a magnetization (δ_{1000}) as measured at a magnetic field of $1000/4\pi$ kA/m of 15 - 65 Am^2/kg (emu/g), and a residual magnetization (δ_r) of 0.1 - 20 Am^2/kg ,
wherein the inorganic compound particles comprise magnetite particles containing at least one additive element selected from the group consisting of magnesium, silicon, manganese and phosphorous, and

wherein the magnetite particles contain said at least one additive element in a total amount of 0.03 - 5.0 wt. % based on Fe.

29. (New) A replenishing developer according to claim 28, wherein the carrier binder resin comprises at least a phenolic resin.

30. (New) A replenishing developer according to claim 28, wherein the carrier comprises a carrier core and a resin coating the carrier core.

31. (New) A replenishing developer according to claim 30, wherein the coating resin comprises a silicone resin.

32. (New) A replenishing developer according to claim 28, wherein the carrier has a volume-average particle size of 15 to 60 μm .

33. (New) A replenishing developer according to claim 28, wherein the carrier has a true specific gravity of 2.5 to 4.5.

34. (New) A replenishing developer according to claim 28, wherein the carrier has a residual magnetization (δ_r) of 2.9 - 6.9 Am^2/kg .

35. (New) A replenishing developer according to claim 28, wherein the carrier exhibits a flowability A in a magnetized state and flowability B in a de-magnetized state, satisfying $B/A \leq 1.5$.

36. (New) A replenishing developer according to claim 35, wherein the carrier exhibits A and B satisfying $B/A \leq 1.2$.

37. (New) A replenishing developer according to claim 28, wherein the carrier has a residual magnetization δ_r (Am^2/kg) and a volume-average particle size d (μm) satisfying:

$$1.0 \leq d/\delta_r < 30.0.$$

38. (New) A replenishing developer according to claim 28, wherein the carrier has a residual magnetization δ_r (Am^2/kg) and a volume-average particle size d (μm) satisfying:

$$5.1 \leq d/\delta_r \leq 12.3.$$

39. (New) A replenishing developer according to claim 28, wherein the magnetite particles contain at least one metal element selected from the group consisting of zinc, copper, nickel, cobalt, aluminum, tin, titanium and zirconium in a total amount of 0.01-3.0 wt. % based on Fe, and both the additive element and the metal element being

surface-exposed on the magnetite particles in a total amount of surface-exposed additive element and metal element of 0.01-1.5 wt. % based on Fe.

40. (New) A replenishing developer according to claim 39, wherein the magnetite particles contain the additive element being surface-exposed on the magnetite particles in a total amount of 0.01 - 0.5 wt. % based on Fe.

41. (New) A replenishing developer according to claim 28, wherein said at least one additive element is divided into a first additive element of magnesium and at least one second additive element selected from the group consisting of silicon, manganese and phosphorous, and said first additive element and said at least one second additive element are contained in the magnetite particles in a weight ratio of 1:9 to 9:1.

42. (New) A replenishing developer according to claim 28, wherein the inorganic compound particles have been surface-treated with a lipophilizing agent.

43. (New) A replenishing developer according to claim 42, wherein the lipophilizing agent is a silane coupling agent.

44. (New) A replenishing developer according to claim 30, wherein the carrier core comprise particles produced by polymerization of a polymerizable composition

comprising the inorganic compound particles and a monomer providing the binder resin through the polymerization.

45. (New) A replenishing developer according to claim 28, wherein the toner comprises toner particles produced by polymerization.

46. (New) A developing method, comprising:
developing an electrostatic latent image on an image-bearing member with a two-component developer comprising a toner and a carrier stored in a developer vessel, while periodically supplying a replenishing developer to the developer vessel,

wherein the replenishing developer comprises 1 wt. part of a carrier and 2 - 50 wt parts of a toner, wherein the carrier is a magnetic fine particle-dispersed resin carrier comprising at least inorganic compound particles and a carrier binder resin, the toner has a weight-average particle size of 3 to 10 μm and contains 1 to 40 wt. % of solid wax,

wherein the carrier has a magnetization (δ_{1000}) as measured at a magnetic field of $1000/4\pi$ kA/m of 15 - 65 Am^2/kg (emu/g), and a residual magnetization (δ_r) of 0.1 - 20 Am^2/kg ,

wherein the inorganic compound particles comprise magnetite particles containing at least one additive element selected from the group consisting of magnesium, silicon, manganese and phosphorous, and

wherein the magnetite particles contain said at least one additive element in a total amount of 0.03 - 5.0 wt. % based on Fe.

47. (New) A developing method according to claim 46, wherein the replenishing developer is supplied to the developer vessel in response to a toner consumption detected by detecting a toner concentration in the developer vessel.

48. (New) A developing method comprising:
developing an electrostatic latent image on an image-bearing member with a two-component developer comprising a toner and carrier stored in a developer vessel, while periodically supplying a replenishing developer to the developer vessel using as the replenishing developer a replenishing developer according to any one of claims 29-45.